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Assembling Commons and Commodities: The Peruvian Water Law between Ideology and Materialisation

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ABSTRACT: The Peruvian water resources law of 2009 (*Ley de Recursos Hídricos 29338*) gathers contrasting – even divergent – intentions and interests; it discursively projects water to be a national common good *and* an economic good. The ideas behind the law connect to global currents that promote the marketisation of water rights and commodification of water services. This paper will use a historical account of water legislation in Peru as well as detailed ethnographic attention to the implementation of the water law and its infrastructure of governance in the city of Arequipa and the Quilca-Chili River Basin to analyse how the law functions as an interplay between its official text and the ways state officials use it in specific encounters with users and stakeholders. Such encounters vary and have different outcomes, at times presenting openings for groups of actors to gain influence, and at other times excluding participation. A clear-cut analytical common/commodity dichotomy is of little use when trying to understand the dynamics of governance around water in present-day Arequipa and Peru. This paper suggests 'assembling' as analytic to grasp how public and private, marketised and commodified interests come together in the implementation of the law of water resources.

KEYWORDS: Water legislation, water governance, integrated water resources management, State, ethnography, Peru

INTRODUCTION

> *These norms were given in the context of a critical situation that the water resources of the country are going through, among others characterised by an increase in demand, the effects of climate change, high levels of contamination of natural springs, insufficient knowledge about its management and a low level of participation and commitment on behalf of the population when it comes to the use and management of this resource (President Alan García in ANA, 2010: 7).*

In March 2009 the Peruvian government finally succeeded in passing a new law on water resources following a lengthy and vexed process consisting of ideological crafting as well as legal-political negotiations along and across the lines of national and international interests related to water and commerce. Arguably, the quotation from the text introducing the water law and expressed by former president Alan García asserts a significant level of ignorance in the population about water as a resource, as well as problematically low participation in its management. 'Modernisation', 'a new water culture' and 'integrated water resources management' (IWRM) are three central tools that the law and the state behind it propose to respond to the alleged deficiencies in the population. The challenges related to water use and governance that the law addresses, and the tools it proposes in response to these challenges, weave together public and private, commercial, common and political interests in complex ways.

This paper traces the 2009 water resources law through its inception, in continuity with previous water legislation and in different moments of implementation, as well as its infrastructure of governance

in the city of Arequipa and the Quilca-Chili river basin in Southern Peru. While Law 29338 was justified as an urgent response to water scarcity caused by climatic changes on the one hand and shifts in productive activities on the other, it was guided by ideas of integrated water resources management (see Orlove and Caton, 2010) and of rolling out a new water culture, involving the optimisation of water management and efficiency in all its uses (See French, 2016; Paerregaard et al., 2016). Law 29338 states water to be a national common good. However, the ideas behind it connect to global currents promoting the modernisation of water resource governance, management and use, which may entail the marketisation of water rights and the commodification of water services. Thus the implementation of the law is a useful case for an ethnographic study of the manifold and complex public-private alliances around the governance and management of water in Peru and the public response. Further, the law and its historic moment of a shift in water governance offer an object of study that challenges scholarship to conceptually move beyond the commons/commodity dichotomy in the understanding of how water is valued and governed by state actors and users in contemporary Peru and Latin America.

Through a historical account of Peruvian water legislation and detailed ethnographic attention to moments of implementation of the water law and its infrastructure of governance in the city of Arequipa and the Quilca-Chili river basin, this article documents how the water law comes into being through its everyday life: in an interplay between the formal law text and specific situations in which state officials materialise the law in encounters with different users and stakeholders. Such encounters happen in a variety of ways and have different outcomes, at times presenting openings for groups of actors to gain influence while at others excluding participation.

It matters how water is valued and how authority and the law are enacted in specific encounters and moments of implementation. Studying in detail how such encounters materialise can teach us how the law comes into being, how different valuations of water are negotiated and how private and public, commercial and marketised interests are tangled in such processes. I propose 'assembling' as an analytic to help grasp how various (at times incommensurate) interests and ways of valuing water are brought together through the implementation of the law. As a verb, assembling points to actors actively engaging in the bringing together of separate components. It also points to the processual quality through which the Law 29338 comes into being. Who assembles – which actors – varies, as we shall see, according to the particular encounters and sites of enactment. Assembling takes place beyond a common/commodity dichotomy, since a heterogeneity of logics and components are being brought together in the assemblage.

This paper combines theoretical insights from political anthropology that emphasise the state not as one uniform entity but made up of manifold bureaucratic, material, discursive, legal and practical processes (eg. Harvey, 2005; Lazar, 2008; Li, 2005; Mathews, 2011) and scholarly analyses of water legislation in the Andes (e.g. Oré and del Castillo, 2006; Urteaga and Verona, 2015; Roa-García et al., 2015). In particular the paper follows Boelens et al. (2016) and approaches the territorial, bio-physical, social and material relations of which water forms part as a 'hydrosocial territory', defined as "spatial configurations of people, institutions, water flows, hydraulic technology and the biophysical environment that revolve around the control of water" (Boelens et al., 2016: 1). This political ecology approach takes into account social and economic differences and processes as well as the technologies, infrastructure and biophysical and power relations that exist around water in a given context. The Peruvian water law is intended as a governance tool to control not only water but also the economic activity and citizen practices around water. Understanding the effects that Law 29338 has on social relations around water in Arequipa and elsewhere therefore requires an approach that attends to the law as a relational phenomenon.

Scholars from social sciences and legal studies have emphasised the ambiguity and contradictions contained in water resources law 29338 (Urteaga, 2015; del Castillo, 2011; French, 2016; Rasmussen, 2015; Paerregaard et al., 2016). On the one hand, the law establishes that all kinds of water, all bodies of water and infrastructure, belong to the state. Water is a public good and not to be privatised; on the

other, it emphasises water as a driver for economic growth and promises to promote the inclusion of private and commercial actors in markets around hydraulic services. While the practices and beliefs of indigenous and peasant communities around water are to be respected and recognised, the state authorities also demand formalisation of water licences and promote efficient technologies and modern use of water resources. Despite claiming to be based on principles of integrated water resources management (IWRM) and establishing a clear "national system for water management" with principles of user participation, decision making processes have become centralised.

With so many ambiguities inscribed into the law much is to be determined by particular local decisions and practices in the quotidian life of what has been called hydraulic bureaucracy (French, 2016), hydrocracy (Wester et al., 2009; Ullberg, This issue) and water citizenship (Paerregaard et al., 2016). This paper follows the line of scholarship that points to the ambiguities in Law 29338 and analyses what can be seen as the 'everyday life' of the water law in Arequipa: what happens to private and public, common and marketised interests as it is being implemented? How can we understand what happens when formal legislation meets practice? How should we assess the impact of legislation and governance on how water is valued locally?

The paper is based on ethnographic fieldwork carried out in the city of Arequipa and the Quilca-Chili river basin for twelve months in 2011-2012 and five weeks in 2017. The flows of water were mapped institutionally, materially and discursively (Andersen, 2015) and participant observation was carried out in meetings and other activities of institutions managing water in Arequipa. Further, the process of establishing a river basin council (as the water law requires for every river basin in Peru) was followed. Interviews and formal and informal conversations were held with state and regional employees of each of these institutions, mostly with engineers but also communication workers. Participant observation and interviews among different groups of water users were also carried out, mainly in urban neighbourhoods, with farmers and, to a limited extent, the copper mining company Cerro Verde and the energy company EGASA – both difficult to access as a fieldworker. In addition, a literature search and document analysis gave an understanding of the historical development of water legislation and governance in Peru. Continuous analysis of news and coverage of the water law provided insights into the kinds of responses the law has engendered.

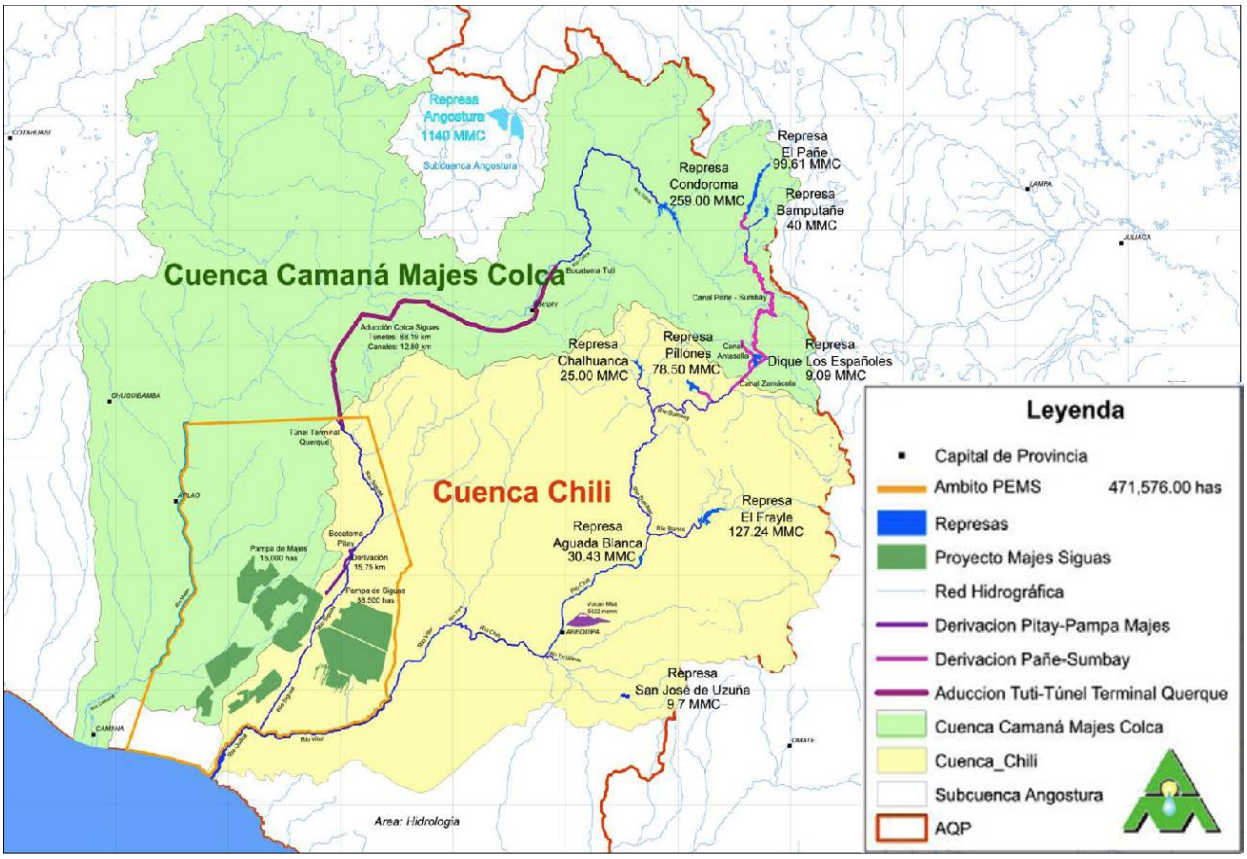
Following this introduction is a description of the flows of water in Arequipa and the Quilca-Chili river basin where the city is located. The history of water legislation in Peru is then outlined before a short description of the institutional infrastructure required by the law to govern and manage water in Peru and Arequipa. Three studies follow of ethnographic, on-the-ground encounters with the law as it is being implemented: in Lima, Arequipa and the dams at the headwaters of the Quilca-Chili basin. The conclusion argues that a clear-cut analytical common/commodity dichotomy is of little use when trying to understand the dynamics of governance around water in present-day Arequipa and Peru. Instead, looking in ethnographic detail at how different intentions, interests and values are assembled, or brought together in specific constellations, and the effects they have on particular relations and practices around water, is more useful in analysing the interplay of public and private, marketised and commodified interests within the implementation of the water resources law and water governance more broadly.

ASSEMBLING 1: THE QUILCA-CHILI RIVER BASIN

The city of Arequipa, with close to 1 million inhabitants, is the second largest in Peru after Lima. It is located in the south of the country, in the department and region of the same name. Arequipa stretches along the Chili river, which gathers water from the Quilca-Chili river basin. This basin extends over 13,817 km2, from the Eastern Andean mountain range, with a highest altitude of 6288 metres above sea level, to the coastal plains of the Pacific Ocean, where the waters of the basin flow into the ocean as Río Quilca. Sitting at the edge of the Atacama Desert, the climate of the Quilca-Chili river basin is arid and semi-arid. As other river basins placed in the Pacific drainage basin in Peru, where more than 70% of the population

is concentrated, most of the year is sunny and dry. Rainfall is scarce throughout the river basin. The rainy season spans from November or December through to March or April, depending on where one is located; different parts of the basin receive different amounts of water. Most precipitation occurs in the upper basin, where some locations receive around 700 mm and others up to 2500 mm of rain per year. The plains of the lower basin, in contrast, receive the least rainfall, from 0-15 mm per year (Jimenez et al., 2010). The highly unequal (temporal and spatial) distribution of rainfall and surface water means infrastructure, monitoring and management are pivotal to secure supply for all parts and activities in the basin. Besides rainfall, water exists in the form of atmospheric humidity, snow and ice stored in glaciers, and as surface runoff (TYPSA et al., 2013). The water used for domestic and agricultural and industrial purposes is collected and stored as surface water. The water is said to be born (*nacer*) in the upper parts of the basin, flowing down stream. This generates a particular dynamic between inhabitants and uses in the lower and upper parts of the basin. Upper basin inhabitants claim they should be rewarded for the water they provide the lower and economically more productive parts of the watershed (Stensrud, 2016). Such dynamics are further complicated by the fact that the supply offered by the Quilca-Chili river basin is complemented by water from neighbouring basins, transferred to the Quilca-Chili basin through several infrastructures (see figure 1).

Figure 1. Map of the Quilca-Chili river basin (yellow), where the city of Arequipa is located, and the Camaná-Majes-Colca river basin (green). Dams are marked in blue.



Note: The map shows how water is transferred from the Camaná-Majes-Colca basin to the Quilca-Chili via infrastructure at two points (purple). The southeastern part of the Quilca-Chili basin, the non-regulated Chili, is supplied by springs, aquifers and a small reservoir (Represa San José de Uzuña) with a storage capacity of 9.7 Mm^3 (Source: AUTODEMA).

On several occasions engineers described the Quilca-Chili as an *artificial* river basin, or one of Peru's most *intervened*, referring to its extensive system of dams and canals. Without these dams, life and production could hardly be sustained in Arequipa. Since the 1950s, when the first dam was built, the city has grown significantly, in population as well as in demand for water. Since then six more dams have been built, some publicly financed, but the two most recent of which were constructed by the copper mining company Cerro Verde. The construction of major hydraulic infrastructure is planned and carried out in accordance with the demand for water and the capacity to finance hydraulic works. Thus, the hydraulic system as a whole assembles public and commercial interests, as well as manifold investments (Ullberg, This issue) and makes a hydrosocial territory (Boelens et al., 2016) in which users negotiate across unequal power relations (Jimenez et al., 2010; Filippi et al., 2014). In 2017 Arequipa's domestic and industrial water demand was an average of 1 Mm^3 per day. The city's biggest, and most influential, water consumers are the semi-public hydro-electricity company EGASA that generates 175.82 MW (non-consumptive use), the copper mining company Sociedad Minera Cerro Verde, the municipal potable water company Sedapar A/S and the farmers who hold collective licences and are grouped into irrigation commissions to collectively manage and operate a canal from which they draw water. The commissions are in turn organised into user councils (*Juntas de usuarios*) that operate larger networks of irrigation infrastructure. Within the basin there is a total of 104 irrigation commissions, organised into nine user councils, of which two operate within the urban area of Arequipa.

The system of dams has a total capacity of almost 410 Mm^3, and when the dams are full they hold enough water to meet the city's needs for over a year without rain, maintaining an average flow of 13 m^3 per second in the Chili river. Not all parts of the Quilca-Chili basin receive water from the regulated system of dams, however. In the southeastern part of Arequipa city urban and farming populations live without a continuous flow of water from the dams. This sub basin is known as the non-regulated Chili (*Chili no-regulada*), and the population receives its water from aquifers, springs and one small reservoir (figure 1). Here, conflict over water occurs regularly; Cerro Verde and the regional government have co-financed subsoil perforations and the construction of water towers to supply the urban population in this district with drinking water (Andersen, 2016). Throughout history water users in this part of the Quilca-Chili basin have been excluded from both formal and informal decision-making (Filippi et al., 2014).

Management of the volumes available in the regulated part of the Quilca-Chili – the discharge and distribution of water – demands constant monitoring and negotiation. Since the 1940s a so-called multisectoral committee (*Comité Multisectorial*), made up of representatives of Arequipa's most influential water-users, has met every second week to decide on water distribution and discuss the maintenance of its infrastructure and water management.[1] Although its resolutions were not legally binging and it lacked official recognition, for many years it was this body which dictated – in a restricted participatory manner – the quantity of water to be released from the dams and how it should be distributed within the regulated Chili system (Filippi et al., 2014). According to engineers from the city's water governance institutions, the multisectoral committee was for many years the only one of its kind in Peru (see also Filippi et al., 2014). When Law 29338 and its national system of water resources management[2] was introduced it entered a hydrocosial territory in which organs and practices of governance and management were already in place and functioning. Many actors in Arequipa have been reluctant to accept the imposed reorganisation of relations and modes of collaboration in water management, nor the redistribution of influence that followed from the water resources law. The law

[1] Exactly when the Comité Multisectorial was established is uncertain. The 1940s were mentioned by an employee of the regional agriculture authority (*Gerencia Regional de Agricultura*), which was the institution leading the formation of the river basin councils. The interview was carried out with the an engineer who functioned as a secretary, taking minutes of all meetings of the so-called Comité Multisectorial and the Grupo Técnico de modernización. According to Filippi et al. (2014), the Comité Multisectorial has been functioning since 1983. I have not been able to verify the date.

[2] Author's translation of *Sistema Nacional de Gestión de los Recursos Hídricos*.

ruled that water resource management be participatory, and whereas the old committee was not participatory in the sense of involving all water users in decision-making, it nonetheless integrated several types of actor across user sectors, and conflict around water was rare – at least within the regulated part of the basin (Filippi et al., 2014).

In 2016 the Cerro Verde copper mine expanded its facilities, doubling its production and requiring more water and electricity for its operation. As part of its expansion the company constructed a wastewater plant to increase its own water supply while meaning that the treatment of wastewater in the city of Arequipa rose from 10 to 90%. In the highlands Cerro Verde financed and built two dams to increase the city's capacity for the capture, storage and distribution of water in the entire watershed throughout the year for mining and other uses. In financing such major infrastructure Cerro Verde is by far the most influential and powerful single water consumer in Arequipa. It is also the main investor in water infrastructure, so that urban dwellers no longer deal only with the national and regional authorities regarding supply. Indeed, in 2006 those in neighbourhoods without running water directed their claims and protests towards the mining company (Roca-Servat, 2014). Following massive demonstrations at the gates of their installations Cerro Verde agreed to finance and build a second treatment plant to supply approximately 300,000 settlers with running potable water. In 2014 the entirely privately financed project was inaugurated as *obra pública* (public work) and potable water began to flow from this modern treatment plant. Throughout Peru partnerships enabling the construction of such water infrastructure are often described as a positive effect of the mining industry, and, in the case of Cerro Verde in Arequipa, the privately owned and transnational mining company is assuming the state functions of securing water supply. In return for financing the infrastructure it acquires 60% of the water stored in the two new dams.

This description of the Quilca-Chili river basin shows how the organisational and material infrastructure that together allow water to flow complicates what can be captured by a common/commodity binary. The former, consisting of powerful users and governing bodies, as well as pressure from less powerful groups, enter water management with different and overlapping agendas: some supply the population with water; some provide capital returns to their investors; others fight for their water needs to be met. Likewise, the material infrastructure is constructed with funds from public and private investors. The organisational and material infrastructure represents the first form of assembling in this article, and we shall return to the organisational infrastructure as introduced by the new law. First, we shall look at the history of Peru's water legislation.

WATER LEGISLATION IN PERU

The first independent water legislation of the Republic of Peru was promulgated in 1902: the Water Code (*Código de Aguas*). Influenced by Spain's water law of 1879, it presented water as a private good (*bien privado*), in the sense that it went with land ownership; all landowners also owned the water springing on or flowing through their property. Although the Water Code was intended to transfer the governance of water from the private sphere to the incipient state administration, it still favoured the owners of haciendas and large estates throughout the Peruvian coast (del Castillo, 2003: 18-19; Oré and del Castillo, 2006: 1-2). In 1911, as part of the code's application, two significant institutional changes were made in water management. In Lima the General Water Office (*Dirección General de Aguas*) was established, and in each of the coastal valleys so-called Technical Commissions (*Comisiones Técnicas*) were installed, aiming to rationalise water distribution and modernise the hydraulic infrastructure (Oré and del Castillo, 2006: 2; Oré et al., 2009: 49). In the following years the first major irrigation projects were built on the coast. Ideas of modernisation and development through large-scale agriculture and export were gaining strength. With President Augusto B. Leguía (1908-1912, 1919-1930), who aspired "to build a new country [*Nueva Patria*] based on the principle that 'the state is (…) the most efficacious agent for carrying out the beautiful work of human solidarity'" (Cushman, 2013: 160), state representatives began to articulate an interest in controlling and improving the administration of water resources, thereby challenging the

power of aristocratic landholders and seeking to transfer control of water to a professionalised technocracy (Oré et al., 2009: 49-50; Cushman, 2013). In 1918 President José Pardo (1904-1908, 1915-1919) introduced the first water tax via a controversial bill that also gave government engineers increased authority over Peru's coastal water resources (ibid: 162). In 1933 water was established as state patrimony (*patrimonio del Estado*) in the constitution. However, this had no effect on the de facto power of the Peruvian oligarchy, which, according to a census in 1961, owned 75.9% of agricultural land. Hence, *hacendados* were the prime beneficiaries of the major irrigation infrastructure financed by the state and built after 1930 in the name of rationalising and modernising agriculture. The legal and material efforts to modernise water use and agriculture were focused on the realities and development of the coastal valleys, ignoring any development of the Andean highlands (Oré and del Castillo, 2006: 2-3, 8).

In 1969 the reformist military government of Juan Velasco Alvarado (1968-1975) introduced the General Water Law (GWL) (*Ley General de Aguas* – DL 17752), which accompanied the Agrarian Reform. In this law all water was reaffirmed as state patrimony, "there is no private ownership of or right to water" (quoted in del Castillo, 1994: 5). The state's ownership of water was confirmed in a new constitution in 1979: "minerals, land, forests, waters and all natural resources and sources of energy belong to the State" (ibid: 4). In contrast to the Water Code of 1902, the GWL included all forms of water: superficial, subterranean and atmospheric. Since water was now considered to be both a public good and a scarce resource it was in the interest of the nation to conserve it, in the figure of the state (ibid: 5). The GWL established social considerations and prioritised supply to domestic use, followed by livestock and agriculture and finally energy production, industry and mining, as well as 'other uses', in times of water scarcity (del Castillo, 2003: 24). The GWL caused organisations of farmers around irrigation infrastructure to spread across the Andean highlands. It designated the Ministry of Agriculture as water authority through the General Water Office and the Ministry of Health was made responsible for water quality. Until the mid-1980s the distribution of water to urban populations had been entirely controlled by the state company Senapa (*Servicio Nacional de Agua Potable y Alcantarillado*), which experienced the challenge of the rapid growth of these populations caused by migration from rural areas due to droughts and violent conflict (Oré et al., 2009: 50-51).

During the forty years the GWL was in force it underwent several modifications, the most significant of which came in 1991. Legislative Decree 653, known as the 'law promoting investment in the agrarian sector'[3] granted special 'securities' to owners investing in the extraction of water from the subsoil, thereby converting water into an economic good and invalidating the social considerations and priority of use that the GWL had stipulated (ibid: 4-5). The changes were made under the government of Alberto Fujimori (1990-2000), whose new political and economic order was characterised by mass privatisation, market deregulation and investment incentives in all areas. State institutions managing water were reduced to a minimum; the privatisation of potable water services was promoted and Senapa was split into smaller entities and handed over to the provincial municipalities (Cuya, 2017), encouraged by the World Bank. From 1993 to 2000 15 pre-projects for a new water law were formulated with the clear intention of establishing property rights over water and creating a water market. Due to strong opposition from user organisations, especially farmers organised in the National Organisation of Irrigation Users,[4] as well as changes in international politics concerning water rights, all of them failed (Oré et al., 2009: 52-53).

During the governments of Alejandro Toledo (2001-2006) and Alan García (2006-2011) several projects unsuccessfully aimed to establish a new water law. In 2007, however, the water law proposal was adapted to the Free Trade Agreement with the USA. In March 2008 a legislative decree was published that promoted private investment in irrigation, and the National Water Authority, *Autoridad Nacional del*

[3] *Ley de Promoción de las Inversiones en el Sector Agrario*

[4] *Junta Nacional de Usuarios de Riego*

Agua (ANA) was created under the Ministry of Agriculture (del Castillo, 2011: 94-95; Solanes, 2013). With these institutional rearrangements the ground was laid for a new water law, which was finally promulgated in March 2009. Since then several decrees have modified the text and its regulation, some of which have been controversial. All in all, Law 29338 has a history of political negotiation, which enabled its inclusion of extreme versions of how water should be administrated.

This historical review of water legislation shows how ideas of water as a private versus a common good are not new, or limited to neoliberal principles or modes of governance. Rather, throughout history, configurations and constellations of private and public interests, ownership and rights related to water and infrastructure have shifted several times. Water legislation and decrees have captured differing ideas, sometimes favouring state control, while at others favouring private rights and investments. In the history of Peru legislation and formal water regulation has in various ways assembled interests and intentions of common as well as commodified interests (see also Carbajal, 2015). Mostly, however, legislation has served as an ideological infrastructure enabling privileged groups to cement their interests.

LAW OF WATER RESOURCES 29338: WATER MANAGEMENT AS AN (UN-)INTEGRATED SYSTEM

With water resources law 29338 the Peruvian state reorganised its water-governing institutions by creating a *Sistema Nacional de Gestión de los Recursos Hídricos* (National System of Water Resource Management). This consisted of "the set of institutions, principles, norms, procedures, techniques and instruments through which the State develops and ensures integrated, participatory and multisectoral management, sustainable use, conservation of quality and the increase of water resources" (Law 29338: Chap. 9, article 10) and added a new state layer to the hydrosocial territory of Peru. The most important organ of the water resource management system is the state water authority, functioning on three levels: the National Water Authority (*Autoridad Nacional del Agua* [ANA]) with offices in Lima; the Regional Water Authorities (*Autoridad Administrativa del Agua* [AAA]), of which there are 14 in the country, and number one, AAA-I, is located in Arequipa. These AAAs govern several Local Water Authorities (ALA), which exist at the level of river basins.

Law 29338 dictates that Peru's water resources be managed by the units of river basins. These units are created by nature and are therefore considered *natural* units of water governance. With the law these natural units have become political units, in which different water users are to participate in its management through river basin councils: "permanent organs under the National Water Authority (…) initiated by the regional governments (…) to participate in the planning, coordination and agreement on the sustainable use of water resources in their respective areas" (ANA, 2010: 24). The planning and management of water resources does, however, not equal influence in governance. The administration of funds and water tariffs is carried out by the centralised National Water Authority and its regional offices. Water licensing is not set to become a collaborative process.

The afore-mentioned Modernisation Project was established with the water law and financed by the World Bank and the Inter-American Development Bank (IDB) to assist the new water authorities in their reorganisation, particularly to help establish water basin councils and promote a *new water culture*.[5] The Quilca-Chili watershed was one of six out of Peru's 159 watersheds to serve as 'cuenca piloto' (pilot watershed) and thus be among the first river basins in which the new paradigm of water governance and management was implemented following the principles of IWRM (see Paerregaard et al., 2016; Orlove and Caton, 2010; Paerregaard and Andersen, This issue).

As mentioned, when the law was promulgated in 2009 there was already sophisticated coordination between water management bodies in Arequipa. A multisectoral committee included the most influential

[5] For a detailed description of this process see French (2016) and Solanés (2013).

stakeholders in decisions about water allocation and the management of infrastructure. Exclusive in the sense that it only integrated powerful actors, the committee also only had a partial view of the watershed: it looked at the supply for different uses in and close to the city of Arequipa and within the territory receiving water from the regulated system of dams but not at more marginal areas of the basin. It did, however, integrate actors from different sectors and uses (agriculture, drinking water, energy, mining, public and private) managing to reach agreements on water discharge and distribution and to respect these decisions. Among the influential stakeholders and members of the committee were EGASA, the Arequipa electricity company; AUTODEMA, the operator of the major infrastructural system, functioning under the regional government; the municipal drinking water company Sedapar A/S that manages drinking and waste water; the regional agricultural authority; Sociedad Minera Cerro Verde; and the irrigation organisations receiving water from the regulated system. The implementation of Law 29338 as much as managing water in new ways has been an effort in rolling out an extensive administrative infrastructure across Peru with the risk of entering into conflict with manifold local modes of managing water (Urteaga, 2015).

The next three sections describe on-the-ground encounters with the law in different sites and moments of implementation. Together, these show how the implementation of the water resources law takes place in situ and how different actors bring into the process varying interests, stakes, concerns and urgencies. The afore-mentioned ambiguities are documented from different perspectives, illustrating how different actors assemble the new water law and its system of governance into their particular realities. The first encounter takes us to the heart of the Peruvian water authorities by visiting ANA officials in their offices in Lima. Ethnographic interviews are used to discover the ideas and principles behind the law, as well as the view of regional variations and implementation as seen from the capital. The second encounter takes us to Arequipa to a awareness-raising workshop organised by the regional state authority (AAA). The meeting between state officials and farmers clearly shows that authority and legitimacy are not easily rolled out, and that farmers fear the new law will privatise water. The third encounter takes us to the higher part of the Quilca-Chili river basin and examines what happens when a new water culture and a shared vision of the river basin are constructed.

ASSEMBLING 2: ENGINEERING OF IDEOLOGIES AND VALUES

The vexed process of accommodating national and international interests related to water and commerce into a legal text and system of management was centred in Lima. Most of the people engaging in the ideological crafting and legal-political negotiations related to Law 29338 were engineers within the institutional framework of national water governance (del Castillo, 2011). The new water law was conceived as a change of paradigm, a new philosophy and a radical change in the governance of water, requiring the participation of the entire population (e.g. Toledo, 2011: 6).

The implementation of the water law was accompanied by a loan from the World Bank and the Inter-American Development Bank (IDB). This materialised in a US$23.7 million Water Resources Management Modernisation Project, which had as its development objectives to "improve the management of water resources through the strengthening of the Borrower's capacity for participatory, integrated, basin-scale Water Resources Management (IWRM) at the central level and in selected river basins" (World Bank, 2009). The law lays out ambitious requirements for the institutional structure governing water, and dictates an integrated and participatory water management at the level of river basins. Thus, each of Peru's 159 watersheds is expected to form a separate river basin council,[6] integrated by a varying amount of members, representing different water uses and sectors, knowledge capacities, and a new governing institutional body around water, which amounts to a considerable task considering the few resources that are available to support it (see French, 2015).

[6] *Consejo de Recursos Hídricos de Cuenca.*

The Modernisation Project aimed to "raise awareness among the population and institutions" via a number of special entities for knowledge management (*unidades de gestión de conocimiento*) within all National Water Authority (ANA) institutions. In 2011 I met Dr. Lanza, an engineer with a key position in the project and an office in a fancy Lima district. He explained that the idea of a new water culture was essential to the 2009 water law and was the result of a long process beginning in 2001. He recounted that:

> Everybody was thinking like engineers; we had to broaden our vision beyond the technical. (…) Water culture refers to people's knowledge [*conocimientos*] and attitudes. Culture is a set of everything; it is how people behave and act in a given circumstance. Culture is also traditions. In Peru there are many different traditions linked to water and we have to respect these. Water culture is about instilling knowledge in people [*meter conocimientos a la gente*] – about how people value water and apply their knowledge. Water has a value and there are too many interests linked to water. As it is now, people aren't valuing water the way they should. They think they already know everything. We want to generate behaviours that correspond to the needs of the future. A culture changes when what people know changes (interview with Engineer Lanza in Lima, September 2011).

Importantly, Dr. Lanza referred to 'water culture' in two senses: on the one hand as *traditions*, in plural, as ways of knowing, practising and managing water – something the nation-state should respect and recognise in all its variety within an idiom of cultural diversity as richness. On the other hand, water culture is defined in the singular, as an instrument to educate and mould people's behaviours and to change attitudes and the ways water is valued. This can be seen as the cultural engineering of ideologies and values with 'modernisation' as a core concept. Water cultures in the plural means embracing multiple traditions, permitting these as rich remnants of the past, while water culture in the singular (obtained through measurements, efficiency, economic value) is understood as the correct way of knowing and doing water, and as belonging to the present and the future. Due to its ambiguity, however, the double discourse leaves state officials and water users with room for manoeuvre in different situations where the law is implemented. Exactly *who* are the people that do not value water the right way and exactly *what* kind of value are they supposed to attribute to water? Who is to be held responsible and how? These unanswered questions constitute a field of ambiguity, or a grey zone, which, on the one hand, veils the diverse ideologies embedded in the law and, on the other, causes insecurity while leaving room for manoeuvre as the law is being implemented.[7]

Between 2010 and 2014 the Modernisation Project established six of the 159 river basin councils intended to operate nationwide with a formulated watershed management plan (Urteaga, 2015; French, 2016). By 2017 the external funding from the World Bank and the IDB had long ceased, and only four further river basin councils were under way. The existing councils no longer receive funding and one of their tasks is to fundraise for operational costs.

Dr. Lanza now admitted there were weaknesses in the implementation of the law:

> The law is good, but is not being followed properly. The problem is one of disorganisation at the level of the regional governments. They are supposed to build the river basin councils, but they don't have the capacity to control the councils, and so the management stays sectorial (interview with Engineer Lanza in Lima, August 2017).

From his point of view, the deficiencies in completing the implementation of the law are due to a lack of capacity among the regional and local actors responsible. The law's ideology and values are good.

From Arequipa the implementation was seen differently. The head of the technical office of the Quilca-Chili river basin council, Engineer Romero, pointed out that, because Peru's water authorities are

[7] This point resonates with Olivia Harris's (1996) argument that modern law always creates a "zone of moral ambiguity", since its constant attempts at fixity and closure are undermined by its own impossibility" (Harris, 1996: 5), resulting in space for legal manoeuvring.

still positioned under the Ministry of Agriculture, the agrarian sector has more leverage in water issues than other sectors, which thwarts the introduction of an integrated management approach. Engineer Romero also emphasised that Peru's water management suffers from "a game of centralisation versus decentralisation" and a division of labour between the centralised state authority and the more or less autonomous river basin councils that receive little or no funding for their institutional infrastructure and the maintenance of operations. Another engineer, working with water resource management in Arequipa, expressed it somewhat differently: "the water law is too big a T-shirt for the kind of state apparatus that we have".

As a simulacrum of an ideal world (Harris, 1996: 9), Law 29338 prefigures water as a national good and an economic driver to be governed efficiently with technical criteria. The engineering of ideologies and values in the population is central to the law and its implementation, and these also challenge a common/commodity dichotomy. The ideologies and values inscribed into the law are ambiguous and diverse, ranging from convictions of water as a national, common good to extreme versions of the marketisation of water rights (del Castillo, 2011). This is the second form of assembling in this article: the law and its implementation bring together extreme ideas and ways of valuing. Such ambiguity leaves room for manoeuvre in the moments of implementation. I now turn to moments of its implementation in Arequipa. These serve to examine how the manoeuvring and negotiation of values and ideology take place, to show that it is through particular everyday encounters that the law comes into being and that the ideologies and values embedded in the law are contested and negotiated.

Raising farmers' awareness and contesting authority

The Administrative Water Authority (*Autoridad Administrative del Agua* – AAA) held several so-called awareness-raising workshops (*talleres de sensibilización*) offered to all irrigation organisations within the territory of the eight watersheds by AAA-I and financed by the World Bank. The objective was to present and explain Law 29338 and the new national institutional framework of water management to the farmers of the Quilca-Chili watershed. In practice, the workshops consisted of two officials – an engineer and a 'knowledge management' spokesperson – visiting all irrigation commissions. One such workshop took place at the *Zamácola irrigation commission* – an organisation dating back to the 1940s when the Canal Zamácola was built as part of a programme to expand agricultural frontiers in Arequipa (Andersen, 2016). Chairs were placed in rows in a room of about 40 m^2 and a projector and laptop were set up. Before the workshop began the *Ley de Recursos Hídricos* 29338 (the water law) was handed out to each participant in physical form: a colourful booklet with photos of lakes and glaciers breaking the legal text. A list of participants was circulated for the farmers to sign. One asked why they had to sign and who was organising. "It has happened before", he complained, "that government institutions ask us to sign without informing us that we are approving important decisions". When 40-some farmers had found their seats, Hernán, head of knowledge management asked: "how many of you know what the Administrative Water Authority is?" As none of the participants (mainly men of above 60 years of age) responded, Hernán provided the answer himself: "we are the authority over water". A PowerPoint presentation was projected onto a wall next to black-and-white photos of the commission presidents of the last five decades. The officials explained the new National System of Water Management, the functions of the new river basin council and the content of Law 29338, putting special emphasis on the new regulations for operators of hydraulic infrastructure. All commissions had the option of maintaining their status as operators, the farmers were told, as long as they proved to be efficient in their water use and capable in organisation skills: making sure that all users were formalised and paying their water tariffs. "Water is a public common good; it belongs to the state", Hernán claimed, "and who is the state"? "The people"? some of the farmers responded in a questioning unison. "Yes", the official continued, "water belongs to everybody [*el agua es de todos*] and that is why ANA exists – to regulate and control". After the presentation there was time for questions. Many of the farmers were critical of the new law; they said power had been taken away from them. They used to have influence when new water rights were to be

granted; now they would not even be able to state their opinions. The law was pro-mining, they claimed. They feared that water, along with influence over water governance, would gradually be taken from them and given to be used by big companies. And how were they supposed to prove efficiency and organisational capacity in their water use if there was already a shortage? "If we have to prove we are more responsible and efficient, so must the government!" one of the farmers stated; many others nodded in agreement. At the end a questionnaire was handed out before dismissing the farmers; many complained loudly and left the building without filling it out.

The farmers' contestation of AAA-I's authority to govern Peru's water resources reveals the institution's lack of legitimacy and the farmers' mistrust of the state. Although the officials presented the law and the institution as new, installing an order yet to come through efficiency and modernity – as a solution to the present deficiencies – the farmers perceived AAA-I as a continuation of the state's past activities and deficiencies in providing infrastructure and access to water. The claim that water is a public good, belonging to everyone, and that the state institutions serve to control and regulate correct use was perceived by the farmers as a threat: if they did not become efficient in managing water, that is, collecting tariffs from all their users, they would lose their right to manage water and operate the canal, and these functions would be handed over to other, possibly private operators. At all six workshops attended the farmers' reactions to the law, state institutions and the practice of authority were similar. They evaluated the law in relation to the new position they had been ascribed: a reduced influence over the water they used and accused of being inefficient.

In 2017 when visiting irrigation commissions in Arequipa, it was obvious that farmers still had mistrust towards the water authorities and the law. A pattern of concern was clear among farmers, as stated by this technical secretary in one of the commissions during a visit and informal conversation: "our farmers are afraid that they [the water authorities] will privatise water".

Organised in irrigation commissions, Arequipan farmers see the rolling out of new governance characteristics as a threat as well as a continuation of what they have historically known, under new titles and divisions (see Paerregaard, This Issue; Stensrud, This Issue). Scholars have written about similar patterns in other Peruvian watersheds, where the Modernisation Project was at work: in the Río Santa river basin, which, like Quilca-Chili was also a 'pilot basin' Adam French (2016) has referred to this continuity as 'institutional inertia' (French, 2016), and Mattias Rasmussen has richly described the mistrust toward the state and governing institutions (Rasmussen, 2015). Having described the implementation of Law 29338 from one group of actors' viewpoint in Arequipa – farmers – the paper now turns to attempts at gathering actors from several sectors into a river basin council.

Gathering a river basin council and knowing water

In November 2011 the recently elected members of the Quilca-Chili river basin council went on a guided visit to the upper reaches of the Quilca-Chili River Basin, where the dams are located. This was organised by the Arequipa team of the Modernisation Project, which worked in close coordination with the National Water Authority (ANA) to establish the Quilca-Chili river basin council with all kinds of water users represented. Besides four officials from ANA and the Modernisation Project, those present were recently elected members of the council, representing different stakeholders and users of water so as to integrate them into water management: a biologist representing the professional colleges, an engineer from the drinking water company, another engineer representing the universities, a farmer and agronomist representing agricultural users, an engineer and a communication worker from the copper mining company Cerro Verde representing all non-agricultural water users, and the only woman, Inéz, representing the peasant communities that inhabit the basin headwaters in the highlands. Never having previously gathered to discuss water issues, these people now formed the first council of the Quilca-Chili watershed.

The objective of the trip, as explained by the director of the Modernisation Project, was: "to understand the functioning of each dam, how the basin system works, how water reaches Arequipa from the neighbouring river basin, Majes-Colca, and to ensure everyone knows what we are talking about".

Backing up these words, the head of the regional agricultural authority and president of the council stated: "management [*gestión*] is not only about knowing the dams, the geography and the physical part; it is also being familiar with the problems, the social part. Mostly, it is important that we all get a complete concept of the river basin – one single vision".

The visit to the dams and higher parts of the river basin in November 2011 was the first of several activities of the recently established river basin council, one of the new institutional bodies created by the law of 2009 to make water management more participatory. In the higher parts of the Quilca-Chili basin crucial hydraulic infrastructure was visited; the first was the Chalhuanca dam, where everyone got out of the vehicles to learn about it. The dam was inaugurated on 14 April 2009 by then president of the republic, Alan Garcia. The construction was financed by the Egasa, Arequipa's electricity company, with the purpose of increasing the generation of electricity for the Arequipa region. The logo of Egasa was present on a plaque alongside the signature of Alan García's government – an arrow pointing to the right: *El Peru Avanza* (Peru Advances).

The functioning of the dam was explained by an engineer from Egasa in technical terms – ciphers, measurements, volumes and types of construction, articulating a specialised way of knowing water. Security monitoring systems and instrumentation controls were discussed between engineers. The vision of the watershed being enacted here was a technical one valuing the infrastructured environment in relation to its capacity to capture and store volumes of water, regulate it and give it direction towards life and production downstream in the city of Arequipa.

Inéz, the woman representing peasant communities, had never visited the dams before: "it is the first time we have been involved in water management [referring to 'formal' management]; for the first time we are represented and can participate. I am learning a lot from this". She talked about her community, located higher than 4100 metres above sea level; how the 400 comuneros in her community get their water from the wetlands (*bofedal*), and that they gather with other communities to talk about and agree on water and other issues: "we have our own ways of going about with water", Inéz told me; "for example, in April we make an offering to the spring". During the trip Inéz watched and listened, without commenting much. Andean communities have a long history of sophisticated and collective management of water (see Paerregaard, 1994, 1997). Inéz went on explaining that although in their community they hold collective ownership over land, and one collective licence to use water, everyone knows which families use different areas and waters, and the work of making canals and reservoirs is collective and carried out by the community (see also Stensrud, This Issue; Brandshaug, This Issue).

An engineer from an Arequipa NGO met us at the dam to explain the 'harvest of water' (*cosecha de agua*) – a project the NGO was promoting in the Natural Reserve surrounding the Chalhuanca dam. Engineer Quispe explained that, due to its topography and hydrologic structure, this specific area was very rich in water production. The harvest of water consists of constructing small-scale 'micro-dams' in collaboration with the highland communities. These small infrastructures of organic materials serve to capture and store rainwater in Andean areas of altitude. The micro-dams will generate little streams of water that help rehabilitate the soil and vegetation and generate swampy areas, bofedal, which is ideal pastureland for Andean camelids like the vicuñas. They also serve to filter the water that will appear in lower areas. Engineer Quispe explained:

> The construction of micro-dams helps improve the economy of the people living in the highlands, and the soils produce more water. It is important that you get to know [*vayan conociendo*] areas like this one, where participation and presence from public and private actors from lower areas has been a rare exception. These experiences are important to know in order to manage water adequately. Take this knowledge and experience with you as you go on to plan and develop politics (video, November 2011).

With the idea and practice of water-harvest, a different vision of the watershed was enacted – one valuing water and its integrated management in relation to the wellbeing of the ecosystem that it is part of, including humans and animals living in the highlands, beyond concrete infrastructure and its water-extraction for life in the city. Jumping into the vehicles to continue the tour, one of the farmers complained that he had not come such a long way to see micro-dams.

What emerges from the description of the tour, rather than one single vision, are specialised ways of knowing the watershed, prioritising different uses and either highland, agricultural or urban livelihoods. The difference between the explanations reveals that each position in the river basin, each kind of use and engagement with water, is linked to different needs and interests, different ways of using and managing water, which all seem diverse and somewhat incommensurable. A shared vision of water and the river basin is difficult, if not impossible, to accomplish. While all agree that the members of the river basin council should know the watershed, different versions of what the river basin is, and what is to be known are being enacted. This finding interrogates and challenges the universal concept of IWRM and points to the importance of finding ways to integrate various epistemologies and ontologies beyond the abstract theory of IWRM. How can different versions count in management practices?

Before returning to the city three more dams were visited: El Pañe from 1966 at 4,542 metres above sea level, Bamputañe, which was yet to be put into use at that time, and finally the impressive Pillones dam, with a capacity to store 80 Mm^3 of water. Pillones was financed and constructed jointly by Egasa and Cerro Verde and inaugurated in 2010.

The visit to the higher parts of the river basin was one particular materialisation of the new water law and the Modernisation Project, both aimed at shaping what the various members of the participatory river basin council knew and forging a water culture. The visit made evident the efforts of the Modernisation Project to produce one vision of the river basin as a step towards a new paradigm for water governance. This vision is under construction, in the making, and, even among the engineers, with their professional and specialised knowledge about water, there was no consensus about what the vision should be: some perceived the river basin as a controllable system of dams that serves to capture, store, monitor and discharge water for productive purposes in the city of Arequipa and further downstream. Others emphasised the basin as an ecosystem in which water extraction was only one part, and the relations between giving and taking should be balanced, and life in the highlands (ecosystems, animals, human communities) – upstream – should benefit as much as town dwellers from new infrastructure and management. Despite such variations and friction between different ways of giving value to water along the river basin (Urteaga, 2015), all engineers explained the basin in technical ways. In this new paradigm of water management, alternative and already existing modes of engaging with water and collectively negotiating water use and rights risk being silenced. Throughout the visit Inéz from the peasant communities was observing and quiet, "learning a lot" and appreciating being included. Although the river basin council offers new inclusion and a space for potential negotiation, not all existing modes of knowing and relating to water and other elements in the landscape are invited to become part of the shared vision of the river basin. Further, other forms of practising water management – regulating the cultural landscapes of bofedales with their infrastructure of soil, grass, camelids and mountain lords, are not recognised by this modern paradigm. In the water law these forms are categorised as traditional modes of handling water, water cultures in plural, situated in the past, when they could be emphasised and included to promote equity and sustainability as principles in water allocation and management (Róa-García, 2015).

The Quilca-Chili river basin council was legally established by decree No 003-2012-AG in March 2012. In 2017 the council was in its third elective period and the council had a river basin management plan (2015),[8] which had been formulated in a process assisted by a consortium of engineering consulting firms,

[8] Plan de gestión de los recursos hídricos de la Cuenca del Quilca-Chili.

financed by the World Bank. In these three periods, the representative of Arequipa's non-agrarian water users had shifted back and forth between two of the most powerful water users in the basin – the Cerro Verde Mining Company and Egasa, the electricity company. Notwithstanding their significant contribution to the construction of the city's major infrastructure, these companies' interests in water distribution obviously differ from those of normal citizens.

When asked in an interview in 2017 whether the dialogue and collaboration in management across different kinds of knowledges and interests was working well, the basin council secretary responded that the council only had meetings when a collective response had to be given for relevant actions. Instead, he explained, there were technical working groups (*grupos técnicos de trabajo*) in charge of specific actions of specific interests.

> Discharge and distribution, for instance, are taken care of by the users through a technical group of uses (*el grupo técnico de aprovechamiento*). They are the ones with most interests. It's difficult that all have the same interest and that management cannot really be integral. Everyone sees it from their angle and also from their interests.

He went on explaining that the technical group of uses makes a water utilisation and availability plan, which is first agreed by all the users, then presented to and approved by the council. The same procedure goes for a plan of discharges and the monitoring plan: "this group carries out the work of the Multisectorial Committee and consists of the same users".

It is pertinent to ask who is favoured by the generation of a new water culture and a uniform way of knowing water and river basins as units that produce water and should be governed with a single vision valuing water the right way: as a resource and economic good. An immediate answer is the World Bank and the market. The implementation process shows, however, that many interests are assembled and materialised in complex forms requiring detailed attention; each local and regional context offers its own constellations of user alliances and power relations, as well as bio-physical and socio-political challenges for water to flow. While water is not yet a commodity in Arequipa, the logic governing the infrastructure of its management and distribution are supporting a transformation towards the commodification of water services. It is yet to be seen how water law 29338 will succeed to integrate actors on equal terms when it comes to managing water. It is crucial to keep a critical and ethnographically detailed eye on how the processes of its implementation unfold, in Arequipa as elsewhere, and how water and water services are assembled and enacted as common and commodity along the way.

In sum, while opening up spaces for limited participation, the law simultaneously cements existing asymmetries and inequalities. Although it states that upstream and downstream users should engage in the river basin council on equal terms, some participate in building dams while others struggle to get running water to their homes and fields.

CONCLUSION

This paper has described how water law 29338 assembles common and private interests in complex ways in the city of Arequipa and the Quilca-Chili river basin and how it discursively projects water to be a common good *and* something to be captured, measured, known, controlled and even commodified at the same time. In order to move beyond a common/commodity dichotomy when understanding current water policies and practices of water governance, this paper argues, it is fruitful to examine how different actors – state officials and water users – manoeuvre in the context of the implementation of the water law and the system that governs water. In the process of implementation, which is historically specific, it is necessary to pay attention to the particular relations that emerge as the water law comes into being through concrete encounters, negotiations and contestations. In this process common, marketised, collective, commodified notions and values are assembled in different constellations.

Situating the current Peruvian water law in its historical context has shown that water legislation in Peru, in its short existence, has always assembled public and private interests, mostly favouring the privileged, leaving silent disadvantaged groups. Through Law 29338 the Peruvian state has projected a new administrative infrastructure that enables state control over water – asserting water to be a public good, belonging to all – but maintaining the power to generate a market around water allocation and services. In the early 20th century the Peruvian state was made and given presence in water governance by building dams, providing concrete irrigation infrastructure and securing land and rights for landholders. Now, state presence is crafted to guarantee water availability for large-scale agro-export and mining and to guarantee the rights of private investors (Guevara Gil et al., 2017). In this particular neoliberal shape, state presence has not been reduced or withdrawn; rather, the topography of institutions, principles and modes of legislation has been re-assembled, placing more responsibility on the individual citizen, while centralising the power of decision-making. These reconfigurations are made in response to local, national and global pressures: free-trade agreements, climate change, aspirations of privatisation and progress through mineral extraction. Such observations are in accordance with Budds and Hinojosa-Valencia (2012), who argue that although water is used locally, whether it is a mine extracting copper, a municipality watering parks, farmers irrigating their fields or a highland inhabitant handling water to improve grazing, "many of the ways in which water is defined, used and governed happen over wider spatial and temporal scales" (Budds and Hinojosa-Valencia, 2012: 120). Law 29338, implemented along with a Free Trade Agreement, a scheme for modernising water governance financed by the World Bank, with its ample ambiguity, is formulated to capture all these scales by gathering a multiplicity of concepts of water and water cultures while simultaneously working to flatten them out with a singular water culture and a single vision of the watershed, and travel through different landscapes, regions and water concepts smoothly, providing water and influence for all through participation in the river basin councils. In practice, however, and as the three encounters of this paper have shown, this is not how it works.

The ethnographic encounters of this paper have shown, firstly, that the projected state system of water resource management is extensive and difficult to materialise due to a lack of resources. Secondly, the system – with ideas and principles of efficiency – and water culture and institutions are reluctantly received by farmers and pre-existing local structures and forms of water management. Thirdly, the intent to create single visions of water and river basins based on 'engineer' ways of knowing water – that is, valuing water as a measurable, fully controllable element and the river basin as an infrastructure serving to channel, regulate and supply water for its productive uses – conflicts with Andean modes of valuing and relating to water.

This points to the analytical contribution of this paper: a clear-cut common/commodity dichotomy is of little use when trying to understand the dynamics of governance around water in present-day Arequipa and Peru. Rather, 'assembling' as an analytic can help grasp how public and private, marketised and commodified interests come together in the implementation of the law of water resources. I have identified to two forms of assembling at play in the process of implementation of water law 29338. One is the assembling of material and organisational infrastructure and the second is the assembling of ideologies and values. In both forms public and private, commercial and marketised interests and intentions come together in complex ways, beyond a common/commodity dichotomy.

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